

THE
CAUSE AND CURE
OF
ASIATIC
OR,
MALIGNANT CHOLERA.

BY
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Author of the Traveller's Medical Guide in a Warm Climate,
&c., &c., &c.

"VENI, VIDI, VICI."



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TO HIS ROYAL HIGHNESS
THE PRINCE ALBERT.

MAY IT PLEASE YOUR ROYAL HIGHNESS,

THE writer of this brief sketch humbly submits it to your Royal Highness, who takes so deep an interest in the well-being of the British people; in the hope that his experience and efforts in arresting the progress of that awful scourge, the CHOLERA, may be appreciated.

And, as in duty bound,

Respectfully subscribes himself,

Your Royal Highness's

Most obedient and devoted humble servant,

THE AUTHOR.



THE
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THE Asiatic Cholera has hitherto baffled the skill of the most eminent physicians in the old and new worlds—its symptoms are so various—its approaches so insidious—its attacks so sudden, so virulent, and so fatal—that, it may savour of vanity or presumption in a humble individual like myself, to attempt an analysis of its causes and effects and to point out a remedy. Having, however, carefully observed the cholera in all its different stages, and having had no fewer than 500 cases under my own immediate care during its continuance in Halifax, I consider myself not altogether incompetent to the task I have undertaken—and as rectitude of intention sanctifies error, if my views are erroneous, I may claim at least the merit of endeavouring to be useful.

I know of no man who has written upon the Cholera who has taken so correct a view of it as the celebrated Sydenham in his work upon the great plague of London in 1666; many treatises have been published within the last few years on this disease, each attributing it to a different

cause; one ascribing it to a derangement of the biliary organs, while another with equal ability labours to prove that it has no connection with the bile—some affirming it to be contagious, and others maintaining the contrary. It is not my business to reconcile these contradictory statements; I shall simply state my own views, and the grounds upon which I arrived at the conclusions I have drawn.

It does not appear to me that the various medical writers who have favoured the world with their observations upon this extraordinary and fatal disease, have thrown much light upon it; they have minutely examined the effect, but have not aimed at discovering the cause—without a correct knowledge of which, it is hopeless to attempt seeking for the cure. I am far from wishing to detract from the merits of those works, I consider them excellent as far as they go, and the authors entitled to praise for the talent and research they display; but I cannot find in their labours any satisfactory definition of the symptoms of the disease during its progress from its first appearance amongst us to its final departure. As I differ very widely from all my professional brethren, both in my ideas of the Cholera and in my treatment of it, I shall proceed to describe my theory in as concise a manner as possible, following it up by a statement of the method of cure as practised by me, illustrating the same by a few cases, and closing the whole by some useful observations, trusting to the candour of the profession to pardon any error or inadvertency into which I may be betrayed, and as my sole aim in this publication is to be useful, I trust I shall escape the charge of egotism on the one hand or of folly and presumption on the other.

In order to convey a correct idea of what seems to me to be the true cause of Cholera, it will be necessary to advert to the doctrine of the lesser circulation as connected with the theory of respiration.

We have the theory of respiration laid down by Dr. Crawford and Mr. Ellice, and although there is a considerable difference of opinion between these two authors, yet it is agreed upon by all medical men, that the carbonaceous matter of the blood is evolved from the lungs in the shape of carbonic acid gas, by which process the blood is purified and arterialised and the temperature of 96°, commonly called blood heat, kept up. In order to render this intelligent to the non-medical reader, it will be necessary to explain what is meant by the carbonaceous matter of the blood and how it is produced. In a healthy state of the body the blood flows from the left side of the heart, through the great vessels called arteries, to every part of the body, and is returned again to the right side of the heart by vessels called veins—this is called the greater circulation; now the blood during this circulation becomes charged with carbonaceous matter, and of course impure—the blood thus impure, is then sent by the heart through the lungs to be purified—this is called the lesser circulation, and the blood thus purified is again returned to the heart to supply the greater circulation.

I was led into this theory from having seen several children born with what is called the *foramen ovale* open, they are in general of a dark purplish colour on the surface with extreme coldness over all their extremities. It is well understood by medical gentlemen, that the two latter symptoms arise wholly from the blood in part pass-

ing directly from the right auricle to the left, in consequence of which it cannot be arterialised, and of course the temperature is diminished and the body becomes of a purplish hue.

On seeing the first or second patient in Cholera, I was probably led to believe the disease somewhat analogous to the before mentioned defect in children, because the peculiar state of the atmosphere which always precedes Cholera combining with the mud and filth of the town produces malaria, totally unfit for respiration. Now as the atmospheric air inspired purifies and arterialises the blood, if that air becomes infected by malaria, the carbonaceous matter cannot be evolved, and consequently the blood is not purified, loses its natural healthy temperature, and black blood flows in the arteries—hence the coldness of the surface in Cholera—hence too the purple hue too fatally observable in the more advanced stages of the disease. It was upon this *theory* I based my opinion of the Cholera, and reasoning thus, I could always detect its approach by the icy coldness of the hand—a symptom I invariably discovered during the cure of nearly 500 patients, and it never deceived me in a single instance. If the patient has not immediate and efficient medical assistance, the coldness increases until vomiting and dejections take place, and they are generally combined with spasms in the lower extremities, which often run through the whole body—the dejections often appear like rice water; by this time the hippocratic countenance makes its appearance, and collapse and death soon terminate the wretched sufferer's fate.

Having touched upon the cause of the coldness of the surface, it is now for me to explain the reason of the dejec-

tions. It is a well understood fact, that when the exhalents on the surface are quiescent, (and they are particularly so when it is cold) that the internal exhalents are stimulated beyond their healthy state and pour their contents into the intestinal canal with accelerated velocity, hence this accounts for the violent dejections. Hypercatharsis may be accounted for by the impure blood acting on the brain in consequence of which the stomach sympathises and its contents are thrown off. The involuntary spasms from which the disease derives its name, may be traced to the want of tonic power produced by the *vis vitæ* being destroyed by the impure blood flowing in the arteries. The approach of Cholera has invariably been preceded in all parts of the world by that peculiar malaria of which I have spoken—having a tendency to putrify all vegetable and animal substances. In Halifax, in particular, which from its situation on the shore of the Great Western Ocean is exposed to frequent changes of atmosphere, the effect was peculiarly observable, for as in ordinary cases the fluctuation of the wind from N.W. to W., or E. prevents the atmosphere from stagnating, so in the last summer while the Cholera prevailed, I found that we had scarcely any wind, and principally from the S. and S. E. with great humidity—but as soon as the wind blew from the N. the Cholera began to disappear, and the town became gradually healthy—the period to which I allude was from the 7th to 15th of September, during which the disease had attained its greatest height; the disease raged most in the confined parts of the town, and in all low and marshy situations, pointing out at once to the most superficial observer the paramount necessity of ventilation.

Much has been said and written on this disease as being contagious : in my opinion, it is not communicable from person to person by contact, for if it were, every medical man who feels the pulse of a patient would be affected, but that it may be communicated to a healthy person remaining any length of time in the same apartment with a cholera patient, or even by hanging over him and respiring the same foul and pestilential air. I have myself been affected by entering a close confined room where a cholera patient lay, and at last learnt by the olfactory nerves the danger of remaining in such apartments. We may thus trace the symptoms of this dire disease through all its different stages from the same great cause—the want of arterialisation of the blood. I shall now proceed to treat, first, of the method of curing the disease ; secondly, of arresting it in its progress ; and thirdly, of preventing or mitigating its attack.

The balance of the circulation being destroyed as stated in page 8, the first great object is to restore it by medicines [which produce reaction ; whenever I was called in to a patient labouring under spasmodic cholera, I had him immediately removed to the largest and most airy room in the house, put to bed, and covered up with warm bed clothes. I immediately administered a draught consisting of *ol. ricini*. 1 oz. ; *ol. cinnamom.* 6 gutt. ; *tinc. opii*, 25 gutt. in a wine-glassful of brandy, made into warm punch, as warm as the patient could drink it—taking care at the same time to procure a supply of fresh air the grand pabulum of life—having all the doors and windows open so as to admit a free circulation. If the draught was rejected, I exhibited a second or even a third—after the draught had

been a short time in the stomach it never failed to restore heat and moisture, to promote and assist which I ordered warm stimulating drinks, such as brandy and water or the like. In severe cases where diarrhœa prevailed powerfully, 20 grs. of *Dover's powder*, combined with 6 to 10 grs. of *Calomel* was of great efficacy in checking it; I also found the effervescing draught very useful in allaying thirst, adding to the usual ingredient portions of ginger and cinnamon. As soon as a vigorous reaction commenced the spasms subsided altogether, and the patient usually enjoyed two or three hours of refreshing sleep perspiring profusely. If spasm appeared in the early stage of the attack, or if there was a sense of fulness in the chest, I usually bled (if the patient's strength would admit it) to the extent of 16 or 20 oz., this I found gave great relief. Warm applications such as flannels wrung out in hot water and applied to the breast and abdomen, bottles filled with hot water applied to the feet I occasionally resorted to in cases of collapse; emetics or friction I never used, the latter I particularly object to, because, as it is impossible to rub all the affected parts simultaneously the part from which the hand is removed being exposed to cold, the spasms are aggravated in consequence, and the patient's strength exhausted. Again, as the muscles and sinews are exposed to an unusual degree of tension during the continuance of spasm, friction in that state exposes them to the danger of laceration, and if the patient should recover, leaves him for a length of time very feeble and unable to walk for weeks, with great pain in those parts where spasms prevailed. After the patient awoke and the perspiration began, I then directed him to be

cooled by removing the extra bed clothes gradually, and shifting him into dry warm clothes. An occasional mild aperient, with light nourishing diet such as arrow-root, generally completed the cure in a few days; this treatment I found successful even in cases of advanced collapse.

When I met with the disease in its mildest form, all that was necessary to arrest its progress was to administer the draught, put the patient to bed as before, and produce re-action—he generally slept for a few hours, after which he convalesced surprisingly fast. The necessity of a free circulation of air never escaped me for a moment; I consider it a grand desideratum in cholera, and always to be resorted to when other means are ineffectual and the skill of the physician is baffled—this treatment never failed and may be confidently relied on in such cases; the same may be observed of vomiting, diarrhœa and cramps, when appearing separately. In vomiting I usually gave hot brandy punch and the effervescing draught well spiced, which appeared to be of service. I had a remarkable case in this stage of the disease, in one Robert Johnston, a mason, he had cramps accompanied by vomiting—not being in circumstances to procure stimulants and being but badly provided with bedding, I ordered him after administering the draught I have spoken of to keep in motion so as to produce re-action. The man accordingly began to walk briskly and continued this exercise in the fields for several hours—the experiment succeeded admirably, he perspired copiously—a re-action was perfectly produced, and the unfavourable symptoms subdued and the disease arrested in its progress.

It was a customary thing with medical men here, to shut up their cholera patients in close warm rooms so as to prevent any free circulation of atmospheric air, the consequence was that I was enabled to predict the death of a patient, which was too generally verified—the Board of Health in Halifax, sent Dr. Donnelly, a naval surgeon, to New York, to procure information when the disease first broke out there, every thing was done by him to ascertain the cause and treatment of cholera. The medical gentlemen in New York were remarkably affable and kind to him and afforded him every facility; he attended all the hospitals in succession daily, he speaks of one of the hospitals standing in a fine airy situation where few or none of the patients died, but appeared to convalesce rapidly. It is strange to say he did not draw the proper conclusion that such a well ventilated situation was the sole cause of that hospital being more healthy than the others, for in his publications he quotes from the Select Medical Council of New York, a precautionary direction to persons predisposed to cholera, by no means to expose the body to a draught of night air; on the contrary, I differ so much in opinion, that I slept with my windows open all the time the cholera prevailed in Halifax; one night I inadvertently went to bed with the door and windows shut, I awoke about midnight with the awful sensation of a dying man, I felt that the soul was immediately about to leave the body, I at last perceived that the windows had been shut down contrary to my usual direction, I immediately ordered them to be opened, in the short period of one hour I felt myself perfectly recovered. I have to state to the medical world that I had, in my own person, nine

different attacks of cholera. Humanity led me to visit many of the poorest class of the community who lived in low and ill ventilated cellars; and from my knowledge of the disease, I could readily predict when and where I should be attacked. Having the fullest confidence in my mode of cure, I never felt uneasy about my personal exposure.

The next point I propose to consider is the means to be adopted to arrest this disease in its progress. In premonitory cases it will be very necessary to attend to diet, because the least irregularity is apt to produce a derangement in the stomach and bowels, and any thing affecting the chylopoetic viscera is dangerous, and is a strong concurrent cause of cholera although not the sole cause. I found premonitory symptoms so strong in my own person, that although naturally of a costive habit there was the strongest tendency to diarrhœa during the prevalence of cholera in Halifax; I restrained the bowels by taking preparations of opium, aqua calcis, &c. and riding out and taking gentle exercise in the open air, avoiding all fruits, and adhering to regular hours for sleep still keeping in view the grand point of sleeping in an airy bedroom with the windows always open; and if black blood can be prevented from flowing into the left ventricle of the heart, the patient can never die of what is called Asiatic cholera. This I am as certain of as of holy writ—so much for Asiatic cholera. My theory of Asiatic cholera accounts for all the fatal symptoms of this dire disease, venous blood remaining in the arteries act so powerfully on the brain that all nervous energy is nearly or entirely destroyed, the sad consequence is that involuntary spasms instantly take place and generally continue until the death of the

patient. The blood not being properly arterialized in the
 lungs, evolution of caloric is checked, and of course the
 heat of the body is, perhaps, not more than 40 or 50 when
 ought to be 96—a healthy person shaking hands with
 such a patient feels as if he had taken hold of a bar of iron
 on a frosty morning, and this alone is quite sufficient to
 satisfy any medical gentleman of cholera at once; in this
 state, the patient's surface is not only discoloured, but
 remarkably cold, of course all the exhalents on the surface
 are in a quiescent state, and if the heat is at all concen-
 trated in the centre of the body, the internal exhalents are
 stimulated beyond any thing like a healthy action, of course
 this accounts for the rice water dejections which invariably
 take place in the later stages of Asiatic cholera. To show
 that cholera has not reached us from India, I shall give
 an illustration of the fact that cholera can be generated
 in any country and even at sea; after cholera had disap-
 peared in Halifax for at least seven or eight weeks and
 not a case had occurred: one evening I entered my dis-
 pensary and there I found six persons from on board a
 vessel, five sailors and their captain, all complaining, two of
 them very bad indeed; as cholera had been nearly forgotten,
 it was some time before I could understand what was the
 matter with them, but so soon as I could not feel the pulse at
 the wrist, and also the icy wrist and hand, I at once pronounced
 it cholera. They had come by water from a village called
 Barrington, about 120 miles from Halifax, with a cargo of
 dried fish, and in consequence of the heat and moisture they
 were decomposing rapidly. These men were no time at sea,
 when they began to feel very miserable and thinking that
 they were catching cold, shut themselves closely up in

their vessel, just making matters doubly worse. They had never seen a case of cholera, as their place had never been visited, and indeed, there were only a few cases and those only premonitory cases throughout the country towns, a few fatal cases occurred with the farmers who were so unfortunate as to be making hay in very low and swampy meadows, they had scarcely time to enter their houses, when they dropped dead. They were so frightened when I told them that they had cholera that four out of the six ran away and it was some time before I could see them, and I never was in a greater difficulty; I knew that if I ordered them to return to their ship they might be all dead before another day, and if I took them to any Hotel and did not state the truth I should be in trouble, and if I mentioned cholera they would have no admittance, and at last I resolved to take the two who were severely attacked, to my own house and allow them a bed-room on the same floor with my own—the other four I ordered to their vessel but on no occasion whatever for any of them to go below, but to walk the deck all night in marching order to keep up the natural heat of the body, which they did, and recovered perfectly, after a little medicine having been administered. The two whom I took home had all the later symptoms of cholera, which were very severe, particularly the cramps in every muscle of the body, and this continued for sometime until I procured a strong re-action of the system, and the following day they were perfectly well. They were most anxious to leave the town and return to their native place—poor fellows they gave me a promisory note for the sum of ten pounds which is not paid at the present period. It ran through the City that the cholera

had returned, and the Magistrates were most busy for several days getting the streets cleaned, &c., I could not help smiling at them, knowing too well that the fish had produced this said cholera; there never has been a case of cholera in Halifax since, I gave everything of cholera to the House of Assembly in Nova Scotia in 1834, and they are at the present moment in possession of the same; I sent it home to Dr. Johnson of Suffolk Place, London, and advised him to publish it, but the Doctor had a theory of his own, and he thought proper to suppress mine.

The remote cause of Asiatic Cholera arises from a peculiar state of the atmosphere combining with vegetable and animal effluvia, and when such is respired, evidently produces the proximate cause (and the immediate cause of death) which is nothing more nor less than the arteries carrying black blood. The whole body is at once poisoned and this is the reason that dissection has never thrown any light on the subject, as all the organs appear perfectly sound to the operator. The only appearance visible to the medical gentlemen on opening any body who may have instantly died of cholera, is large quantities of black blood in the left ventricle of the heart, and in the large arteries of the subject. The great difficulty that has arisen of giving the true cause of Cholera, arises from the dissectors being unable to discover any disorganisation of the different organs of the body of those who have died of Cholera, this, and this alone, has retarded science as respects the true nature of Cholera.

The moment that a Physician can produce red blood in the arteries, his patient is out of all danger, and properly speaking, wants little or no medicine. When in Halifax,

I used to break the window glass, when the windows were built in and could not be opened, all round the patient, and before I left his bed room could easily perceive convalescence rapidly approaching. The heat of the body rising to 96, and the indigo or blue colour of the body disappearing like a cloud before the sun. I always selected the largest room in the house, and the preference was always given to the highest apartment; I again repeat this so that medical gentlemen must bear in mind the necessity of procuring fresh air for their patients. Medical Gentlemen could trace the Asiatic Cholera up rivers and every periodical was full of its rapid march—but they never drew any such thing as a conclusion why and what was the reason it preferred the river courses. The fact is rivers run in the valley, and few rivers are divested of filth and mud. This is the true cause of Cholera.

The first remarkable case that came under my observation, was Capt. Maxwell of the British Barque Industry, lying in the Port of Halifax. He was seized early in the morning of the 2nd September, 1834, with violent vomiting, accompanied by great faintness, he endeavoured to warm himself by walking smartly up and down the wharf, but without success, he grew gradually worse—his skin became cold—his face livid—and his lower extremities were attacked with cramps so that he was barely able to reach my house; I found there was no time to be lost, and as it would cause a fatal delay to move him to his vessel, I had him put to bed in my own house—I administered the draught mentioned in page 10, had him covered up with warm bed clothes—the bed room door and windows wide open so as to ensure a free circulation of air, I gave him a strong glass

of hot brandy and water—in a short time a brisk re-action took place, he began to perspire and soon fell into a sound sleep which lasted three hours, he looked as red as a lobster, the perspiration continuing the whole time, when he awoke he found himself much relieved, the cramps had left him and he complained of nothing but lassitude and thirst. He was now shifted into dry warm clothes, and was enabled to rest for a short time while the bed was made, after he was in bed again, I gave him the effervescing draught and cooling drinks, he rested well, and on the following day he went to the Custom-house and cleared out for London, taking twelve cholera draughts with him; an ounce weight of the mixture constitutes the draught, which were put up in draught vials with a wrapper around each containing printed instructions in full for fear of any neglect or mistake.

All the sailors on board his ship had the cholera at the same time, the same draught was sent them with the instructions, all of whom got quite well and never left the vessel.

The cases were pouring in night and day, not one of whom came to the establishment died. I had requested that all those who wished to put themselves under my treatment would do well to come to my residence as soon as they felt indisposed, as there was no time to lose, there would often be from forty to fifty at a time waiting, the worst ones were all picked out by the cold icy hand, and these were first attended to. Young men and labourers who had no rooms to retire to, I have often directed to go to the Cholera Hospital and get a bed, and by running hard to the Hospital, some of them got so well on their

way by the time they got to the Hospital that they were not admitted and returned and told me they would not admit them. Consequently afterwards I directed all the single men who came, to go up to the race course and run two or three times around until they perspired freely, then to return again to the dispensary and report progress, when each was served with a brimming tumbler of hot brandy punch well spiced with ground cinnamon and ginger, or hot port wine negus, whichever they preferred, for which I never received or asked any remuneration—and all the poor people who sent and were not able to come were most promptly attended to. I had three boys who did nothing but carry out medicines and attend to the sick poor. They severally administered the draught first—had the patients put to bed, covered up with all the clothes they could find to heap over them, then opened the windows to admit air, and ordered everything to be kept quiet so that the patient might go to sleep, after which they would return, carrying brandy punch and wine negus, followed up with the best Bermuda Arrow-root made with sweet milk seasoned with lump sugar, spice and port wine, beef tea, &c., &c., and the smartest of the lot was an Irish boy only nine years of age, he attended to the coloured people and thought nothing of attending forty patients in one day, the treatment was so simple. There was a clerk hired who did nothing but take down the applicants' names and addresses; as soon as the boys came in the medicines were ready, and off they went again to the parties respectively. The boys knew every stage of the complaint, and how it was to be treated, and cured hundreds that I never saw at all. All patients were paid two or three visits in the day, when the required

nourishment was afforded them all at my own expense—
 an expensive establishment, embracing the most systematic
 regulations, was kept up during the period that cholera
 raged. My poor horses were jaded to pieces, for they
 were out night and day; and there were none to attend
 but poor people, for the rich ones all ran away, so that in
 place of being made rich, it was quite the reverse. A case
 of extreme collapse, which is but one of many that I have
 been called to. One morning I was called out about nine
 miles in the country, and during my absence several called
 requesting my attendance personally on my arrival; I had
 to take them in turn, and the most anxious of all was the
 last visited: unfortunately a Mr. Clark was after me from
 nine in the morning until nine at night before he saw me
 personally, I was so engaged—when I stated it was most
 cruel of him not to call in some other medical gentleman, so
 as to prevent collapse if possible; by the time I saw her
 she was in the last stage and quite black; I considered the
 case hopeless, and was about to leave the room when I
 ascertained that she was four months gone in pregnancy.
 When I saw that two or perhaps three lives might be lost,
 I then endeavoured to do all I could to restore her. I
 administered the draught mentioned in page 10, fol-
 lowed up with cordials, and singular to say her husband
 called about twelve the same night and told me that she
 had so far recovered as to sit up in the bed and speak to
 him, and that the reaction was so great that she was as red
 as scarlet all over her, which redness continued from a
 fortnight to three weeks; I saw her two or three times a
 day during her convalescence, she went her time and did
 very well afterwards, as also the child, and I believe she is
 alive at the present day.

I shall state another case of collapse — a Mrs. H. who had suffered greatly from cholera before I saw her, being in the last stage of collapse; the first thing I did I had all the doors and windows opened, and then administered my draught. This case was so interesting that I returned again in about an hour, and found the doors and windows shut; I had much difficulty in propagating my theory amongst the better classes as they had been given to understand that the air was infected, consequently they were determined to shut it out, which caused me much anxiety and trouble. I immediately sent for a carpenter and had the doors taken off their hinges and carried into the garden, being perfectly well aware that if I could not make the arteries carry red blood, of course it would be a fatal case; such was my theory, that I had much more dependence on pure air than medicine—the latter was only given to cause re-action in order to balance the system. But the former prevents the proximate cause which is the cause of death; and those medical gentlemen who do not attend to this organic law cannot, literally speaking, be of any service in cholera, particularly in extreme cases, and the want of a thorough knowledge of the above law has been the cause of thousands and tens of thousands dying of cholera. I sincerely trust that for the future the medical world will not lose sight of such a valuable fact, as that pure air produces pure blood in the arterial system, without which we cannot live. But to return to the patient: shortly after the doors were removed and the windows re-opened, a strong re-action of the system took place; the skin became red and contined so for some days, which was followed up with a slight attack of consecutive fever,

the only instance of the kind that I had amongst all my cholera patients, but by great attention she convalesced faster than I anticipated, notwithstanding her being so extremely low, and I believe she is alive at the present period.

Another case of a very fine boy ten years of age. I was called to see him about twelve, A. M. ; it was a very foggy still day, he lived very near my own residence. The sick chamber was a back room looking into a court, only one window in the apartment, and as a matter of course it was shut when I entered it, I raised the sash the first thing, there were several persons in the room and I ordered them all out, observing that the boy required all the air the room could contain and much more before he could get better. The mother went directly and sat down in the window, she told me that the patient was very cold all over him and that she did not hold with such treatment, she must send for another doctor. I then told her if she would follow my instructions I thought the patient would very soon recover, but she declined and I was dismissed, and as soon as the other doctor came the window was shut down, and before twelve hours had elapsed the poor boy was buried ; I never saw it fail when a cholera patient was shut up in a confined room but that they soon died. I was afterwards called to see a fine young man named Scott, the mate of a vessel, when I entered his room there were a number of sailors and others round his bed, I ordered them all out of the room, administered the draught in page 10, and begged of the landlady to let no one enter his room until I returned in the morning, as I felt convinced he would soon get better, but alas, when I returned the following

morning, I was informed that he was dead and buried, and I felt very sorry for his untimely fate, at the same time quite surprised that he did not recover.

About a fortnight after a sailor called at my dispensary, whom I remembered I had seen in the room with Mr. Scott, the mate, and I asked him if he knew how it was that he died, when he told me that as soon as I had gone away all of them went into the room again, they sent for another doctor who ordered quite a different treatment and shut down the windows at once, but he very soon died and was directly carried off in the cholera cart to Fort Massy. Poor young lad I was sure there was some invidious interference, and as I found my treatment always carried them through if not interfered with; I invariably found that when my patients were interfered with by other medical gentlemen, they were sure to die, the practice was so different. I would not allow any person to go near my patients for fear of disturbing them, as they invariably fell asleep a few minutes after they took the draught, and if by any means they were awoke, it had a bad tendency and gave much more trouble. I always saw that when an hour or two of refreshing sleep was induced, they awoke quite well and entirely out of danger; I rarely ever heard of one to relapse. I caused the fan to be very freely used where there was confined air, which had a very good effect. I should have mentioned in a former part of this work that General Sir Colin Campbell, Governor of Nova Scotia, in the year 1834, when the cholera was so very severe in Halifax, and particularly in the army, he (the Governor) had the good sense to order the regiments out of the barracks, ten miles from the city, and put them all under

canvass—there never was another case of cholera amongst the troops! so much for the General. This could not have happened from science, but accident; however, the result to the army was equally the same as if the order had emanated from a first-rate physician. To prove that my theory of cholera is correct, I shall merely state a fact which occurred in Halifax, during the epidemic:—There were two barracks in the city, one called the North, the other the South; The south barracks lie on the side of a hill, and, of course, one side of the square overlooks all the other sides, a greater circulation of pure air was the natural consequence, and in this barrack there were only three premonitory cases of cholera. The north barrack consisted of a square of four stories in height, on a level piece of ground, something like Buckingham Palace, there being scarcely any circulation of pure air, cholera broke out amongst the Rifles, and at first became very fatal amongst the band, and no doubt those who played on the wind instruments in the first place became seriously affected; I believe the band lost about two-thirds of its number and upwards, when at last the privates suffered in a great degree, until the Governor sent them into the country, when the disease entirely disappeared. In Halifax, all the low localities and confined places, suffered in a greater degree than those situated in places where there was a free circulation of pure air. I have learned that the north barracks have been destroyed by fire lately; I trust that the government will be more careful when they rebuild another, so as to admit a more plentiful circulation of air, without a large supply of which, neither the animal or vegetable creation can exist.

When in Halifax, in 1834, I used to take the doors from off their hinges and remove them to the gardens, so as to give the cholera patients pure fresh air, for if I left them they were sure to have their doors all shut again in the short space of an hour.

In 1849, when cholera made its first appearance in London, I sent my manuscript on this dire disease to the General Board of Health, and when I called to see them, their secretary told me that they were just now thinking exactly as I had written 15 years ago, and from their directions to the people of Jamaica about the treatment of cholera, I find that they have taken a leaf out of my small work. I wrote a letter to Earl Grey, Secretary for the Colonies, advising him to secure a few copies of my work on cholera, for the Island of Jamaica, as also the editor of the *Times*, to give all concerned due notice of such a work being in the *press*. The General Board of Health (of London) have favoured me with a copy of their reports of cholera, which are to be presented to both Houses of Parliament in February, 1851. I have not only read them but studied them carefully,—I must admit that the physicians have laboured very hard indeed for the small remuneration they have received. They have collected an immense number of facts, valuable in themselves, but still they ought to have drawn conclusions more valuable for the young student, their division of cholera into diarrhœa and collapse, appears faulty. I do not, in all their reports, see a single well defined symptom of true cholera; I hesitate not a moment to state that, in cholera there is a certain, and in fact, the only true sign of this dire disease, and this is the cold, icy hand, without almost any pulse at the

wrist ; when this is felt I consider it true cholera, although many of the other symptoms are wanting. As to collapse being cholera, I must insist on its being neither more nor less than a termination of a fatal disease, and that diarrhœa is in general the termination of almost all diseases, and the real cause of collapse, marasmus, consumption, and yellow fever, all terminate in diarrhœa, and the said purging is truly and actually the cause of collapse and death ; I believe that diarrhœa in all those malignant diseases is an effort of nature to relieve herself of that matter which is really and truly hurtful to the general system ; but, alas, in cholera she cannot draw any thing pure from the fountain of blood—the system being poisoned entirely from black blood, and of course nature has to succumb. And further I am fully satisfied that cholera is no farther an epidemic than this, that there does exist a peculiar state of the atmosphere, which assists the proper development of the latent and poisonous gases lying on the surface of the ground, whether in the streets or in the houses. For the proper development of cholera, its favourite month appears to be September, and the reason to be assigned for its prevalence in this month arises from the long continued heat of the summer, when decomposition of vegetable and animal matter is taking place rapidly ; and strange to say, that this month is also a favourite of yellow fever at New Orleans, United States, and I believe all other places ; and no doubt, governed by the same laws as those of cholera. I see, from their reports, that they believed it to be imported to Hull (I mean cholera) ; there was no importation of the disease : but a ship may, and is often as foul and dirty as any house whatever, and this was the case with the *Pallas*.

The aliment which supports cholera in all its virulence, is always in England and everywhere else, lying in its latent state, or otherwise it cannot exist ; but at the same time I do admit that in certain seasons there is a peculiar state of the atmosphere more favourable to its proper development than others, and if any medical gentleman will take the trouble to consult the works of the celebrated Sydenham, there they will find different constitutions as he calls them, which favoured various diseases, and in some of those seasons certain diseases were much more malignant than others. The great plague of London was no other than cholera in its worst type, and the black-hole of Calcutta was another awful instance of its intensity, and merits the consideration of all, and particularly the profession of medicine.

The greatest physician England ever saw was Sydenham, and he gave the proper name to cholera—he called it the *Pestilential Fever* ; for, properly speaking, vomiting and purging, are neither more nor less than symptoms of some great disturbance in the general system, and other fatal symptoms of a too fatal disease. Cholera which has its favourite month *September*, has also its favourite hour, which I have generally found to be from three to four o'clock in the morning, and the only reason which I can assign for its early visit at this early hour, arises from the circumstances of perhaps four to six persons sleeping in a small room, with all the windows and doors perfectly closed on them, when in fact they literally breath one another's putrid air, over and over again ; such conduct is capable of producing cholera at any season of the year, and I am only astonished that this disease is not an

ndemic of almost all countries in winter as well as in summer, and what is truly surprising the more the people feel indisposed, the more they exclude the fresh atmosphere, and this mistake does not rest wholly with the ignorant, but in cholera the very faculty have been truly guilty of much mischief in this respect. When I found medical gentlemen shut up their patients in close ill-aired rooms, I never failed to predict death in a few hours, and I never was, in one instance, disappointed in what I avered. Vegetable and animal life cannot exist without pure air, and the very farmers are finding it out, for they are just now destroying all their hedge rows, so that their valuable vegetables may live and prosper.

In 1834 I have often been obliged to break the people's window glass and to remove their doors, so as to save their lives, and they gave me the handsome name of Dr. Window. In 1849 I had about 100 cases of cholera, and only lost two patients who were long collapsed before I saw them. I should mention that good nurses in this disease are truly invaluable, for if the bed clothes are not constantly kept close to to the patient's body, and reaction produced and kept up, it is quite impossible that cholera patients can recover, whether in the premonitory stage or that of collapse—I might refer the reader back to Dr. Sydenham's practice on the Plague of London: his treatment has not been surpassed by the most able physicians of the present day as respecting cholera.

The great fire of London destroyed many thousand houses which were nests of disease, their streets were not only narrow and confined, but kept in bad order, and the awful consequence was, that they were visited (as might

have been expected by any intelligent person), with a dreadful state of what I consider malignant cholera in its worst type, and what appeared a great calamity, at last turned out one of the greatest blessings to the population at large. I had a brother, a surgeon in the Honourable East India Company's service in 1807, and he states in his journal, that his native soldiers were in the habit of bathing in the Ganges almost every day—that he observed them to enter the river in perfect health, but by the time they had their clothes on, that they were seized with cholera, and he attributed this to the mud and filth of the said river. Cholera has had much to do with rivers in all countries, but this only arises from the proper aliment of cholera being there, either in its latent state or when other causes concur to make it active, when it is at once developed, and thousands of the inhabitants are of course hurried off to an untimely grave. I consider the medical gentlemen who have an accurate knowledge of cholera to be far superior to any who are without such information: in the treatment of all fevers arising from the decomposition of vegetable or animal matter, for there is a close connected chain through all those diseases; in fact, they are more or less from the same poisonous gases, cholera being a greater draught of the deleterious matter than ague or typhus fevers. In cholera the poisonous draught is such, that in general there is no reaction, unless medical assistance is immediately at hand; whereas in the other fevers reaction takes place, and if the patient can be supported for the space of twenty days, he has every chance to convalesce. The most valuable medicine in all these diseases is pure unadulterated air. The great Professor Gregory, of Edin-

ough, used to point out the necessity of all patients
 labouring under typhus, to be always exposed to fresh air
 knew a student who had a severe attack of typhus; he
 went for Gregory and Professor Duncan, it was in the
 month of February, the student had his two bed room
 windows open, and the snow literally blowing into the
 centre of the room, when the late *illustrious Gregory*
 opened the door and saw the snow in the room, he clapped
 his hands and exclaimed, "*thou art a noble pupil of mine.*"
 It appears like supererogation to dwell on what is the pabu-
 m of life—I mean pure atmospheric air, for it is the soul
 and life of all red blooded animals on the face of this
 earth. Mr. Grainger, surgeon (of London), has been
 most useful in cholera, his reports to the General Board of
 Health show indefatigable industry, and I consider him well
 entitled to the patronage of the rich and powerful of Old
 England, as he has been the means of saving thousands
 of his countrymen. Cholera in the premonitory stage is
 one of the most manageable diseases in existence, but in
 state of collapse the difficulty is almost insurmountable;
 or when the rice water dejection once takes place, every
 time the patient goes to stool he has a new stroke of the
 complaint; in fact, if reaction had taken place he loses it
 at every motion of the bowels, and the more he is cooled
 externally the stronger the purging. If possible the
 patient in such a state of the disease should not be moved
 from his bed as it entirely destroys any chance of con-
 valescence; in this, as in all other stages of cholera, the bed
 clothes should be increased and kept close around the body
 of the patient; for if the heat is once dissipated, the
 patient's case becomes very hopeless, and if spasms occur

the difficulty is further increased in keeping the patient under the bed clothes, for cold endangers all cases of cholera. The patient must be kept warm, at the same time as much cold air to be breathed as possible, with all the windows and doors open night and day—this should never be lost sight of for a single moment. I cannot close my small pamphlet on cholera without observing that both Houses of Parliament are about to meet, and as they are the guardians of all the inhabitants of Great Britain, &c., they are bound to look after the health and prosperity of all, and particularly of the industrious classes. The great *Adam Smith* says that *labour* is the source of all *wealth*, if this is really a fact, it certainly behoves the Parliament to think seriously of the health of their labourers. The taxes on soap and the light of heaven appears to me to be of a cruel description, as such taxes are closely connected with cholera. I do maintain that cleanliness and ventilation are the true preventives of such a dire disease as that of cholera; but still I have too much confidence in the wisdom of such an august body of intelligence, to think for a moment that they will fondle the *snake* in their bosoms which will ultimately sting them to death. War, famine, and pestilence, are undoubtedly their real business to ward off, or avoid, in fact this is the duty of all governments, even those of a despotic nature.

I fondly trust that before the House rises, the members will consult the proper means to ward off, as much as possible, any thing like *endemic* or *epidemic* diseases from this country. Britain has long been the stronghold of liberty and glory—in fact, the protection of all other nations—but cholera is an invisible enemy, which neither sleeps nor

slumbers, and might, in a short space of time, thin our ranks more than all the armies of Europe. Laws which trench on cleanliness and pure air, ought to be repealed immediately; at all events I am perfectly satisfied that such laws are like a severe case of cholera, that is to say they are in a state of collapse.

ON CEMETERIES.

DR. SUTHERLAND'S Report to the General Board of Health, respecting intramural interment in the metropolis, is of the first order, and redounds highly to his credit as a gentleman of great scientific attainments. I consider the government very fortunate in the appointment of two such illustrious characters as the Earl of Carlisle and Lord Ashley, as also the medical gentlemen under their authority—their labour has been immense in collecting such a vast deal of valuable information, not only respecting cholera, but as regards the foolish custom of burying their dead in the city. To any person at all acquainted with decomposition of vegetable or animal matter, it really appears that such steps should have been taken three hundred years ago, instead of the present period. It is certainly a great reflection on us that the continent of Europe is so far in advance of us in this respect, although in many other things they are immeasurably behind us. In extramural sepulture I would advise the government to select in all cases throughout Great Britain, an easterly location for their cemeteries, as the westerly winds prevail more than two-thirds of the year, and such are generally very mild and warm—much more apt to develope animal gases than an easterly wind, which is generally on the other hand cold and disagreeable, and less apt to carry along with it those

gases so detrimental to living creatures. It is not to be denied that all easterly winds in England are deleterious to health; in fact, all easterly winds in England, which prevail, are neither more nor less than continental weather, and not English weather; and all continents are either colder or warmer than any island in the same latitude. But the reason for having all our large cemeteries to the east of any city or town in England, is in consequence of the westerly winds prevailing for the most part of the year is, that it is a well understood fact, that in Italy, near the Pontine Marshes, travellers avoid travelling near those marshes when the wind is blowing from off them, or otherwise they are almost certain to be attacked with intermittent fever; even at a very considerable distance they do not escape from fever, and if gases from decayed vegetable matter are so very dangerous, and can be carried for miles, any person of the least science can at once perceive the great danger arising from gases strongly developed from animal decomposition. There is no exaggeration in this statement, and if what the Board of Health has recommended be properly attended to, I venture to predict that London will be one of the healthiest cities in all the universe. Complete drainage is the first grand step to be attended to, for without it extramural cemeteries would be of little avail—all the evils which concur to develope cholera or typhus, must be properly attended to, and after this I am positive that time itself will convince those who are friendly to the notion, that cholera is really imported into this country, will be convinced ere long of their error and mistake. It only requires those who are in authority to do their duty, and

ne will ultimately show them a wonderful reward for all their labour. The streets must be always kept clean and free of all mud and filth; I have been in most of the large cities in the United States of America, and I have observed the water running night and day in their gutters, as pure as spirits of wine; so much for the Americans! and I must say that there are certain organic laws, and if we shall disobey them we must pay the penalty; indeed, common sense should dictate to us the necessity of cleanliness; even in almost all savage countries we can perceive that the inhabitants are naturally prone to acts of cleanliness. The Indians are very partial to bathing, whether in the East or the West.

The French people suffered greatly before they gave up the silly custom of burying their dead in their churches. I remember the celebrated John Bell, of Edinburgh, in his lectures, stating that many of the churches had to be shut up in consequence of dreadful cases of typhus fever arising from such foolish customs, and I believe that the custom of extramural cemeteries has taken place from dire necessity with all the powers of Europe; for most of the people are so partial to the dead, that it appears to me to be a natural law, inherent in the bosom of every living human being to have their dead as near to them as possible. So with the Egyptians and the Romans, any person found taking their dead for dissection, &c., were in general stoned to death and this natural law was so strong with them, and the penalty of the crime so severe, that it was the means of retarding the science of anatomy for even centuries; as it is very reasonable to believe that the circulation of the blood would have been known long before the days of the

celebrated Dr. Harvey. Lord Bacon says that knowledge is power, but he might also have said that knowledge is, or ought to be, health; but what is the use of all our boasted knowledge if we allow the dead to destroy the living, and this has been the practice going on in London for several years, from 1832 to 1849, and still the people are so wedded to their old customs, that they would rather believe that malignant cholera is really an article of importation than otherwise; and so long as this wretched theory is considered correct, they are not very apt to believe that the remedy is positively in their own hands—a false theory is therefore calculated to destroy its thousands and millions of valuable lives. It is proved beyond a certainty from the medical reports, that the strength and glory of Great Britain suffered greatly by cholera in 1849—I mean the working classes, for they are the source of all wealth and of all strength; for pray what is any country without them. The death of so many able-bodied men has thrown many widows and orphans on those working men who are still alive. I lament to think that our very best mechanics were in general the victims of this dire disease. Dr. Sutherland in his valuable report, says that “the physical and moral evils resulting to the public health, from the practice of burying the dead within the limits of the metropolis, have been so frequently pressed upon the public attention as to have become matter of notoriety. The practice is one in itself so reprehensible, that neither ancient customs or prejudices can be allowed for one moment to have any weight in its defence, and nothing but the apparent difficulty of dealing with the question could so long have set aside the dictates of common sense and right feeling in regard to it.”

is not always easy to separate the effect of each specific cause of disease where a number co-operate, but after a vast extensive experience, the evidence which has come before me has produced in my own mind an abiding conviction, that the effect of many causes of unhealthiness, and that of church-yards amongst others, has been very much underrated. I have no doubt, whatever, that the burial grounds as at present constituted, are a continual source of pestilence; slow perhaps in its operation, and hence overlooked by ordinary observers. They are undermining the constitutional stamina of thousands of our own populations, while people are denying that they have any injurious tendency, and it is only when some epidemic comes to try it like a touchstone, that the consequence of long antecedent neglect becomes so apparent as to rivet attention and excite alarm. It has some times happened that fatal results of a very sudden character have been produced by exhalation from grave yards in the metropolis; but such, alas, is the small comparative importance attached to the accidental loss of human life, that these occurrences have passed by almost unheeded, and the system remains to this time the same. Similar events formerly took place in various continental cities, and are to be numbered amongst the reasons which led to the final abolition of intramural interments in France and the German States." It is to be hoped that the Imperial Parliament will, this session, make an act so as to prevent any more bodies from being buried within the city of London, and all the other large cities in Great Britain and Ireland. As I have already stated that the aliment which supports malignant cholera and typhus, is not in general

imported into this country, but actually lying latent when certain causes concur to develop those gases mental to human life, then and not till then, we are certainly in great danger. However we have it greater of our own power to prevent the development of deleterious gases, which are occurring almost everywhere, and if we will disregard the proper means to ward off danger, we must only take the consequences.

On the Lambeth side in 1849, we lost one of the best surgeons of the present age; and when I heard that he lived close to a church-yard, I was literally surprised beyond measure, why a person of his reputed abilities should have chosen such a location: if I was made a present of the finest house in London near a church-yard, and obliged to live in it, I should refuse the said gift—so much for church-yards. Without great cleanliness, I do not think that the Members of Parliament are entirely safe in their House of Commons, as it is situated in a low locality surrounded by a church-yard on one side, and on the other side the muddy and filthy Thames. In 1849, the opposite side of the river—I mean the Lambeth side—they suffered severely by the cholera, and until the Thames is cleared of all the filth of London, and the drainage better, we naturally expect that we shall have a few more visits of this dire disease; the same causes will produce the same results: there is nothing strange in this expectation, consider it as certain and possible as that gunpowder will explode when fire is applied to it.

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